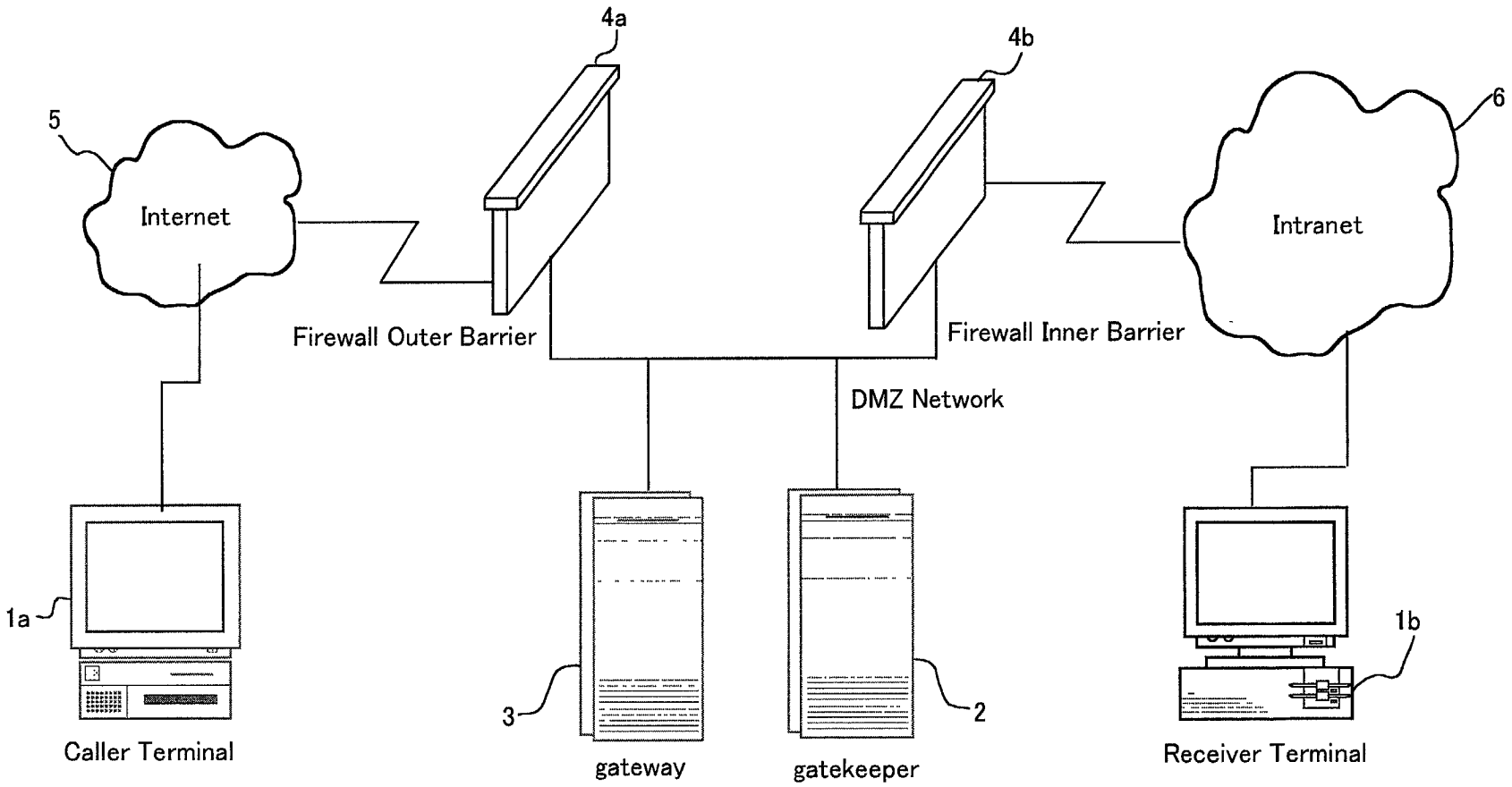
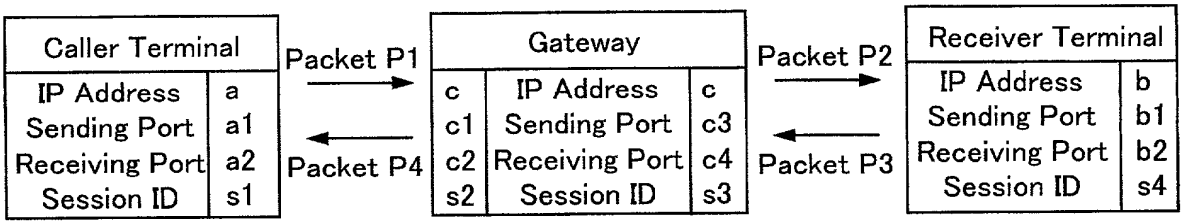
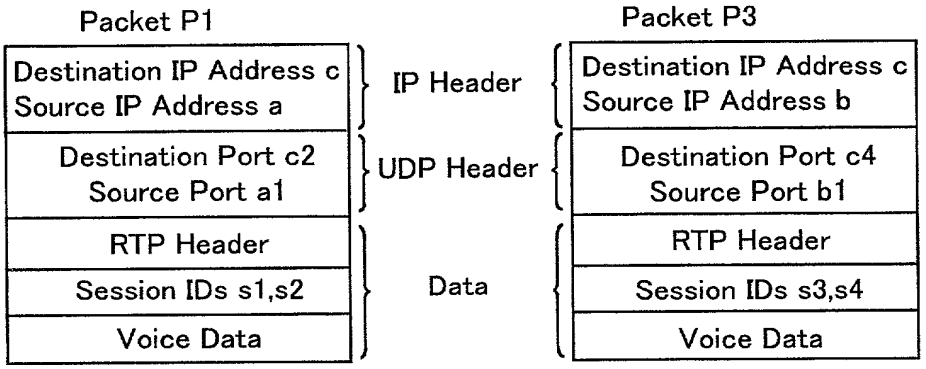

4a
4b
5
6
Internet
Intranet
Firewall Outer Barrier
Firewall Inner Barrier
DMZ Network
1a
1b
3
2
Caller Terminal
gateway
gatekeeper
Receiver Terminal

Fig. 1


Caller Terminal
IP Address a
Sending Port a1
Receiving Port a2
Session ID s1
Packet P1
Packet P4
Gateway
c IP Address c
c1 Sending Port c3
c2 Receiving Port c4
s2 Session ID s3
Packet P2
Packet P3
Receiver Terminal
IP Address b
Sending Port b1
Receiving Port b2
Session ID s4


Packet P1
Destination IP Address c
Source IP Address a
IP Header
Destination Port c2
Source Port a1
UDP Header
RTP Header
Session IDs s1,s2
Voice Data
Data
Packet P3
Destination IP Address c
Source IP Address b
Destination Port c4
Source Port b1
RTP Header
Session IDs s3,s4
Voice Data

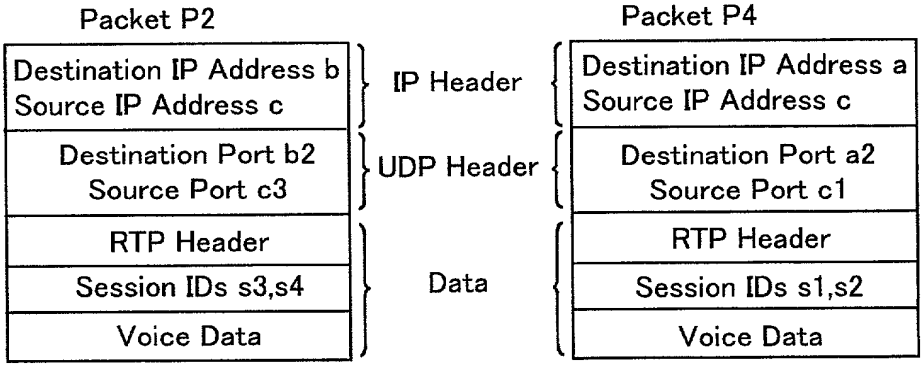

Packet P2
Destination IP Address b
Source IP Address c
IP Header
Destination Port b2
Source Port c3
UDP Header
RTP Header
Session IDs s3,s4
Voice Data
Data
Packet P4
Destination IP Address a
Source IP Address c
Destination Port a2
Source Port c1
RTP Header
Session IDs s1,s2
Voice Data

Fig. 2

Caller IP	Receiver IP	Session ID	Sending Port	Receiving Port	Commun. IP
a	b	S1,S2	c2	c1	c
⋮	⋮	⋮	⋮	⋮	⋮

Fig. 3A

Caller IP	Receiver IP	Session ID	Sending Port	Receiving Port	Commun. IP
a	b	S3,S4	c4	c3	c
⋮	⋮	⋮	⋮	⋮	⋮

Fig. 3B

Caller IP	Receiver IP	External Info.				Internal Info.			
		Session ID	Port Number		Commun. IP	Session ID	Port Number		Commun. IP
			Sending	Receiving			Sending	Receiving	
a	b	S1,S2	a1	a2	a	S3,S4	b1	b2	b
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

Fig. 3C

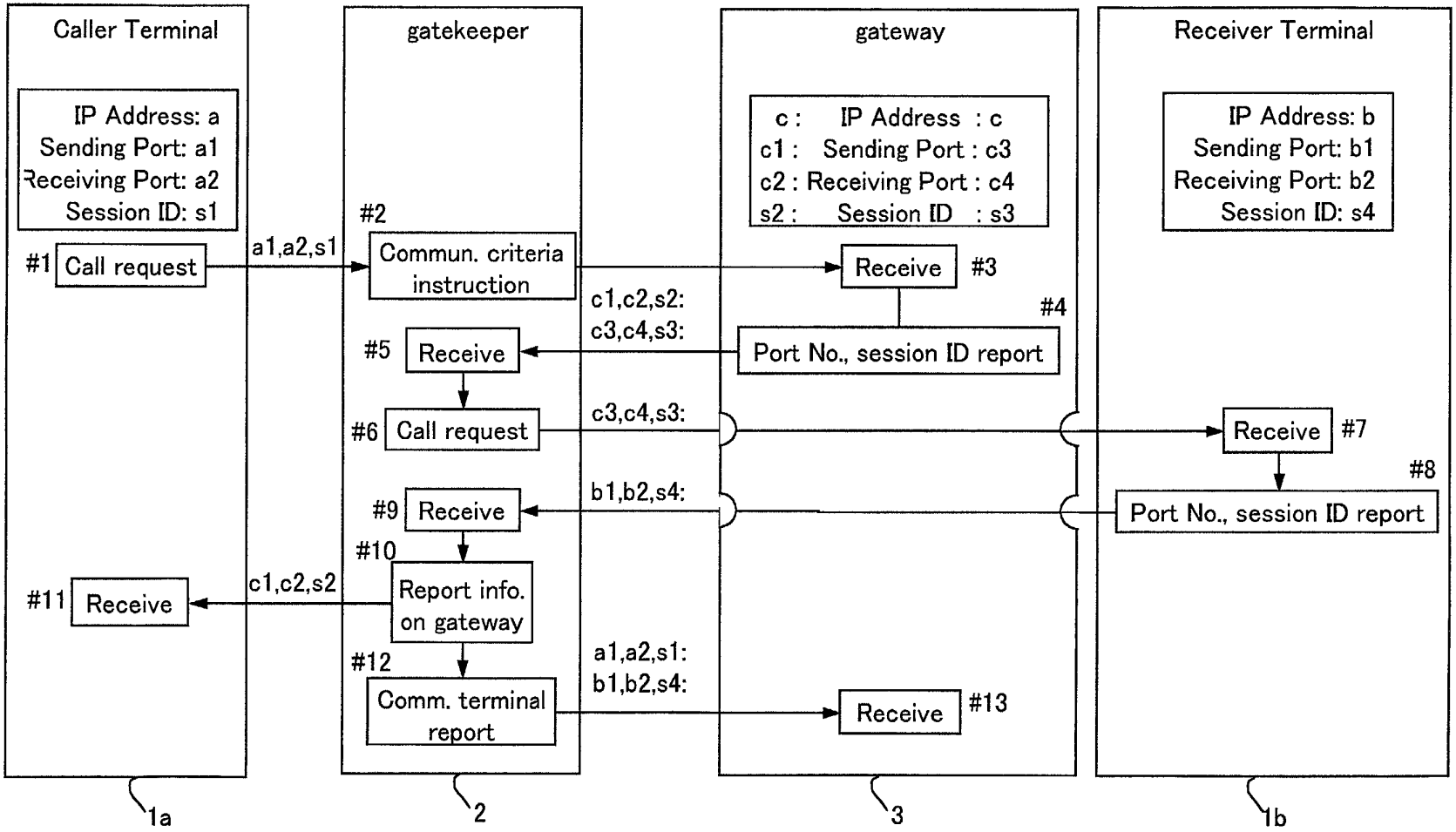

Caller Terminal
IP Address: a
Sending Port: a1
Receiving Port: a2
Session ID: s1
gatekeeper
gateway
c : IP Address : c
c1 : Sending Port : c3
c2 : Receiving Port : c4
s2 : Session ID : s3
Receiver Terminal
IP Address: b
Sending Port: b1
Receiving Port: b2
Session ID: s4
#1 Call request
a1,a2,s1
#2 Commun. criteria instruction
Receive #3
c1,c2,s2:
c3,c4,s3:
#4 Port No., session ID report
#5 Receive
#6 Call request
c3,c4,s3:
Receive #7
#8 Port No., session ID report
b1,b2,s4:
#9 Receive
#10 Report info. on gateway
#11 Receive
c1,c2,s2
#12 Comm. terminal report
a1,a2,s1:
b1,b2,s4:
Receive #13
1a
2
3
1b

Fig. 4

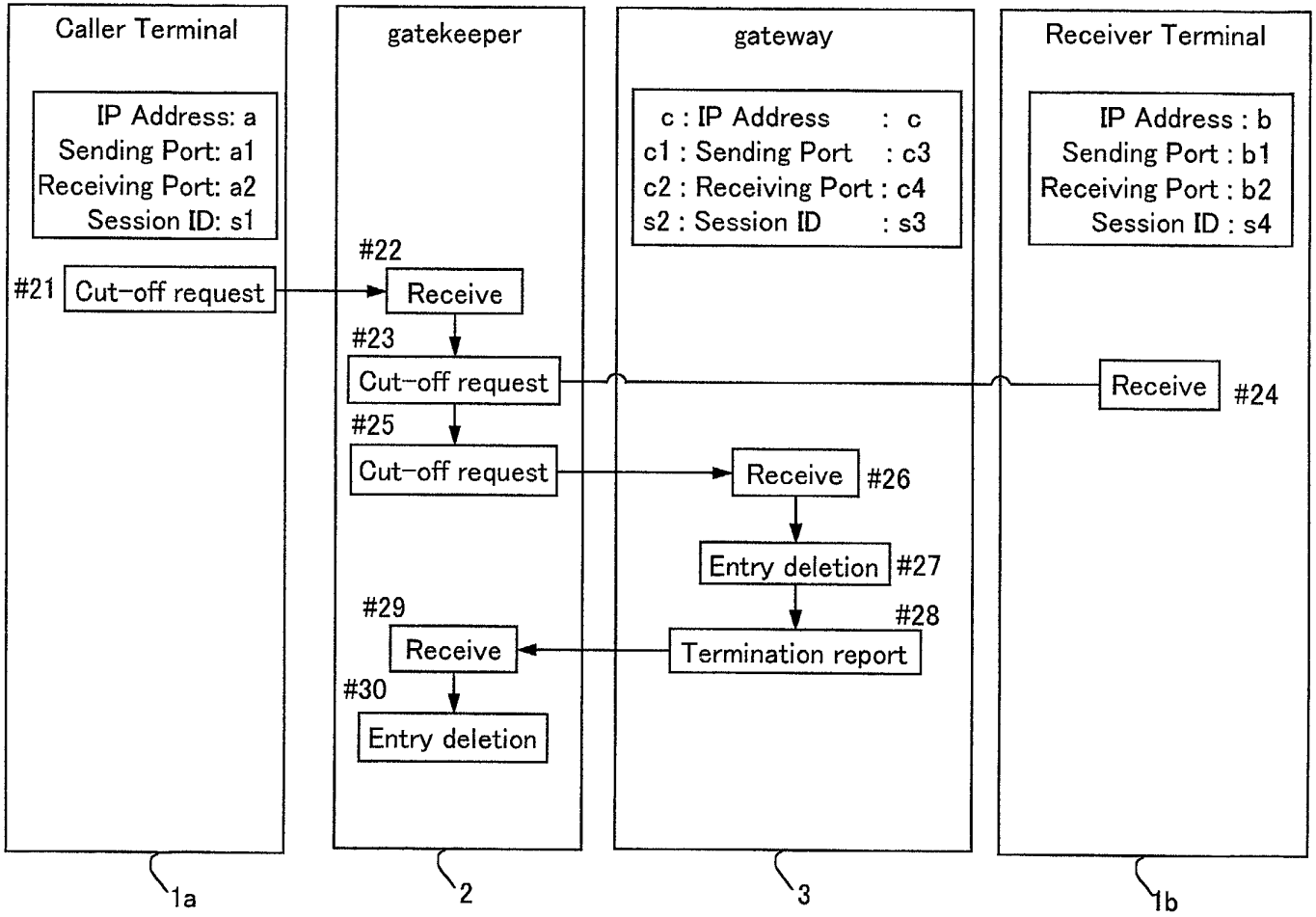

Caller Terminal
IP Address: a
Sending Port: a1
Receiving Port: a2
Session ID: s1
#21
Cut-off request
gatekeeper
#22
Receive
#23
Cut-off request
#25
Cut-off request
#29
Receive
#30
Entry deletion
gateway
c : IP Address : c
c1 : Sending Port : c3
c2 : Receiving Port : c4
s2 : Session ID : s3
Receive
#26
Entry deletion
#27
#28
Termination report
Receiver Terminal
IP Address : b
Sending Port : b1
Receiving Port : b2
Session ID : s4
Receive
#24
1a
2
3
1b

Fig. 5

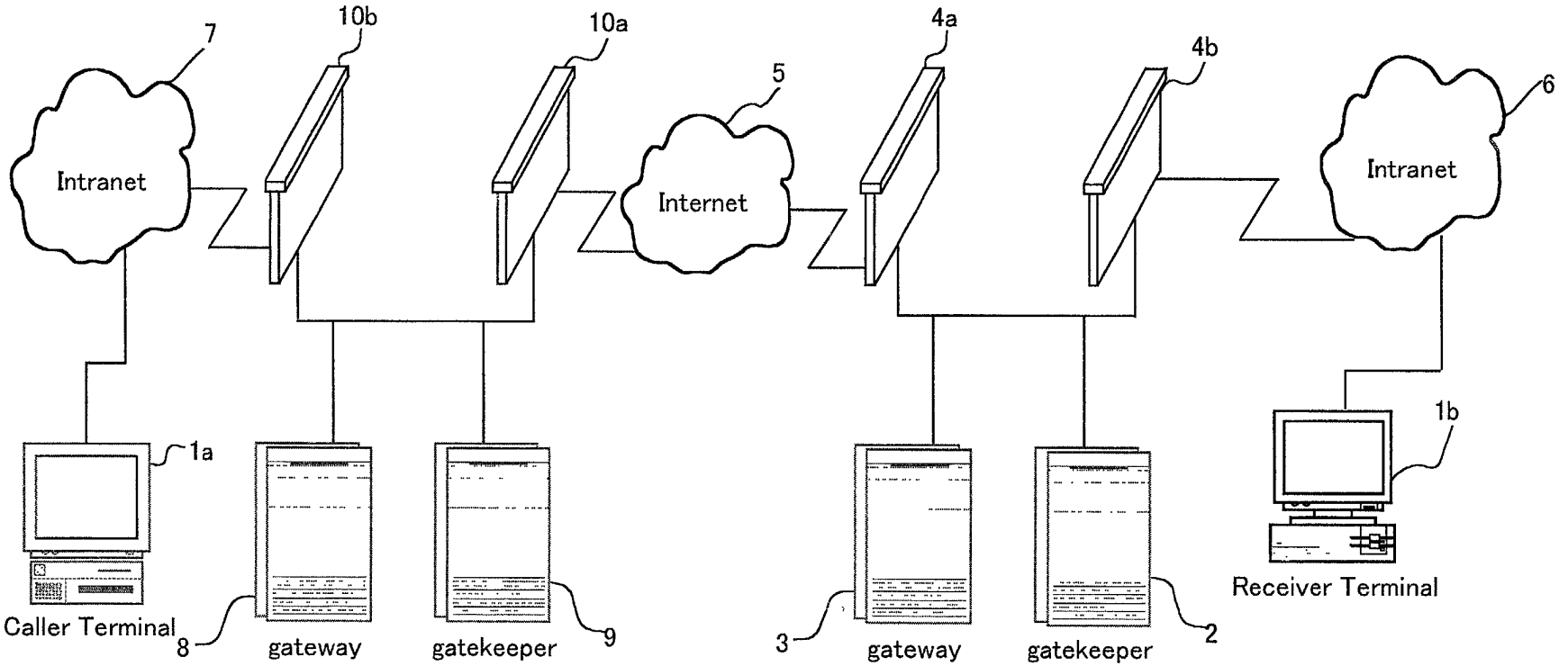

7
10b
10a
5
4a
4b
6
Intranet
Internet
Intranet
1a
1b
Caller Terminal
8
gateway
gatekeeper
9
3
gateway
gatekeeper
2
Receiver Terminal

Fig. 6

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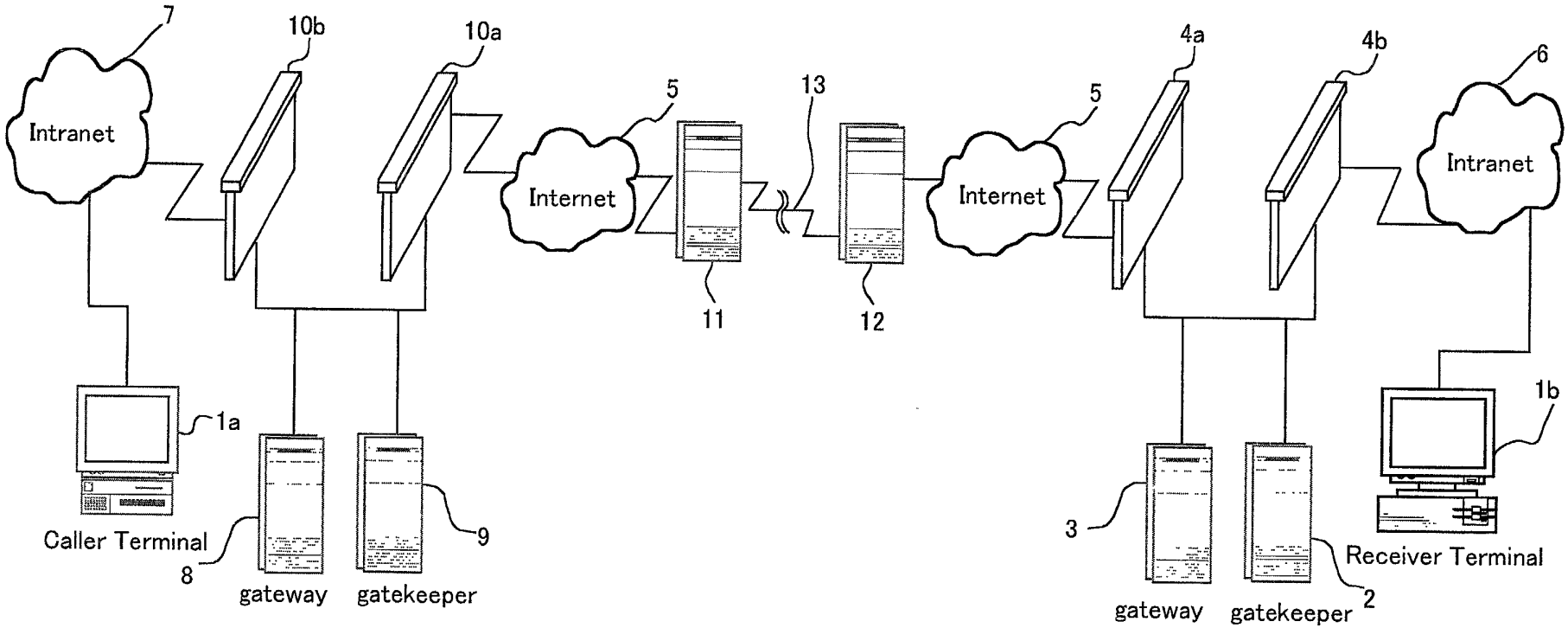

Fig. 7